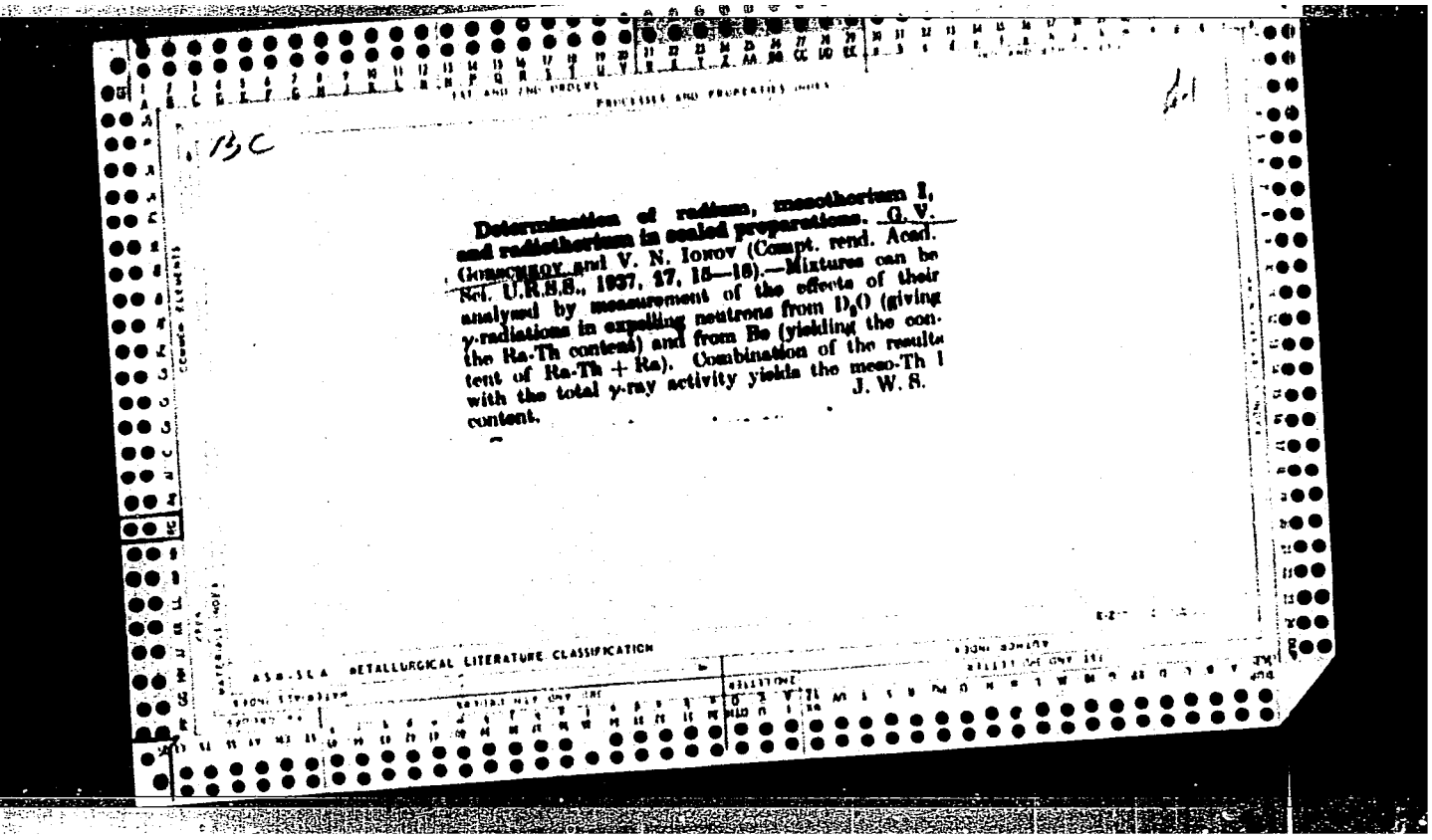
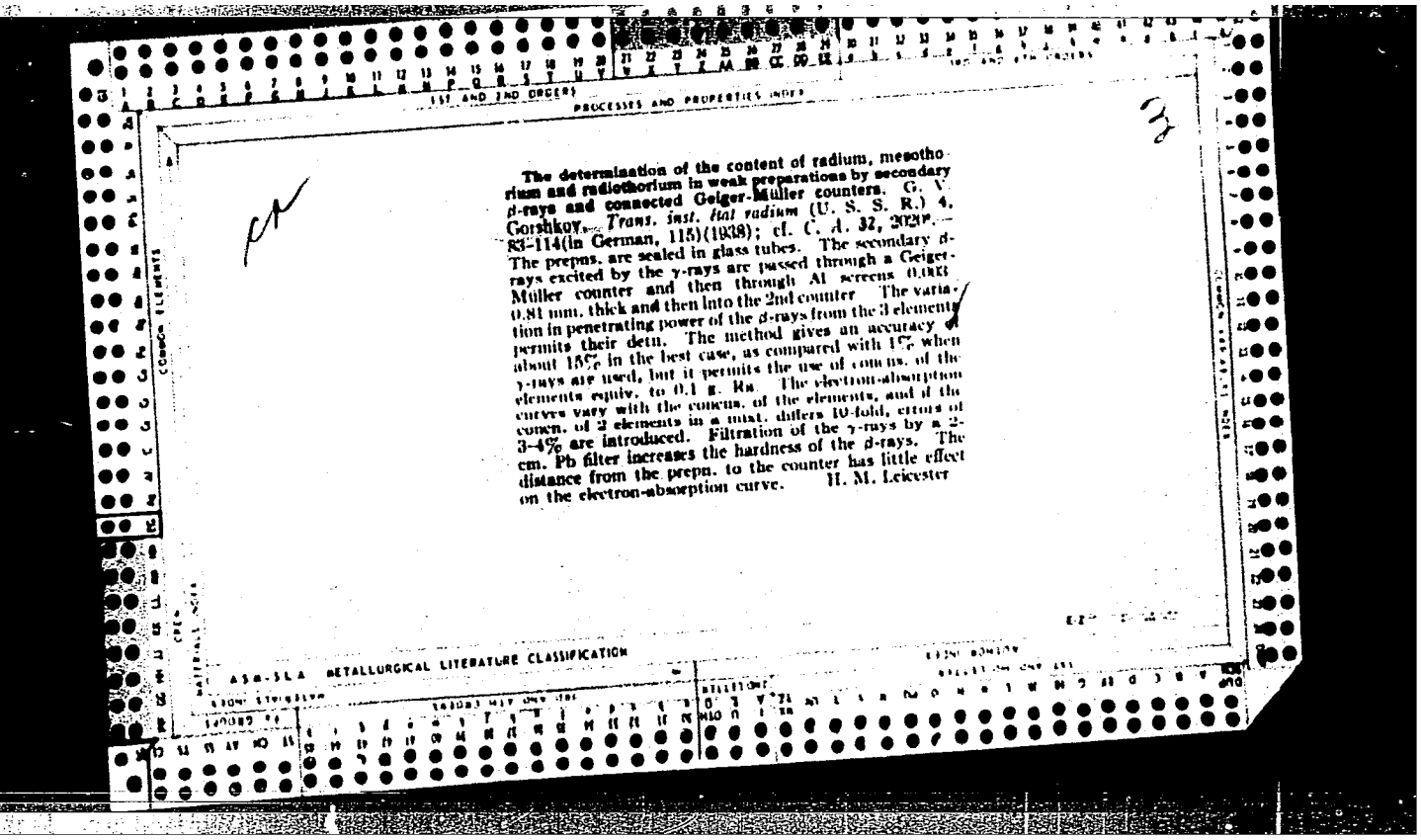
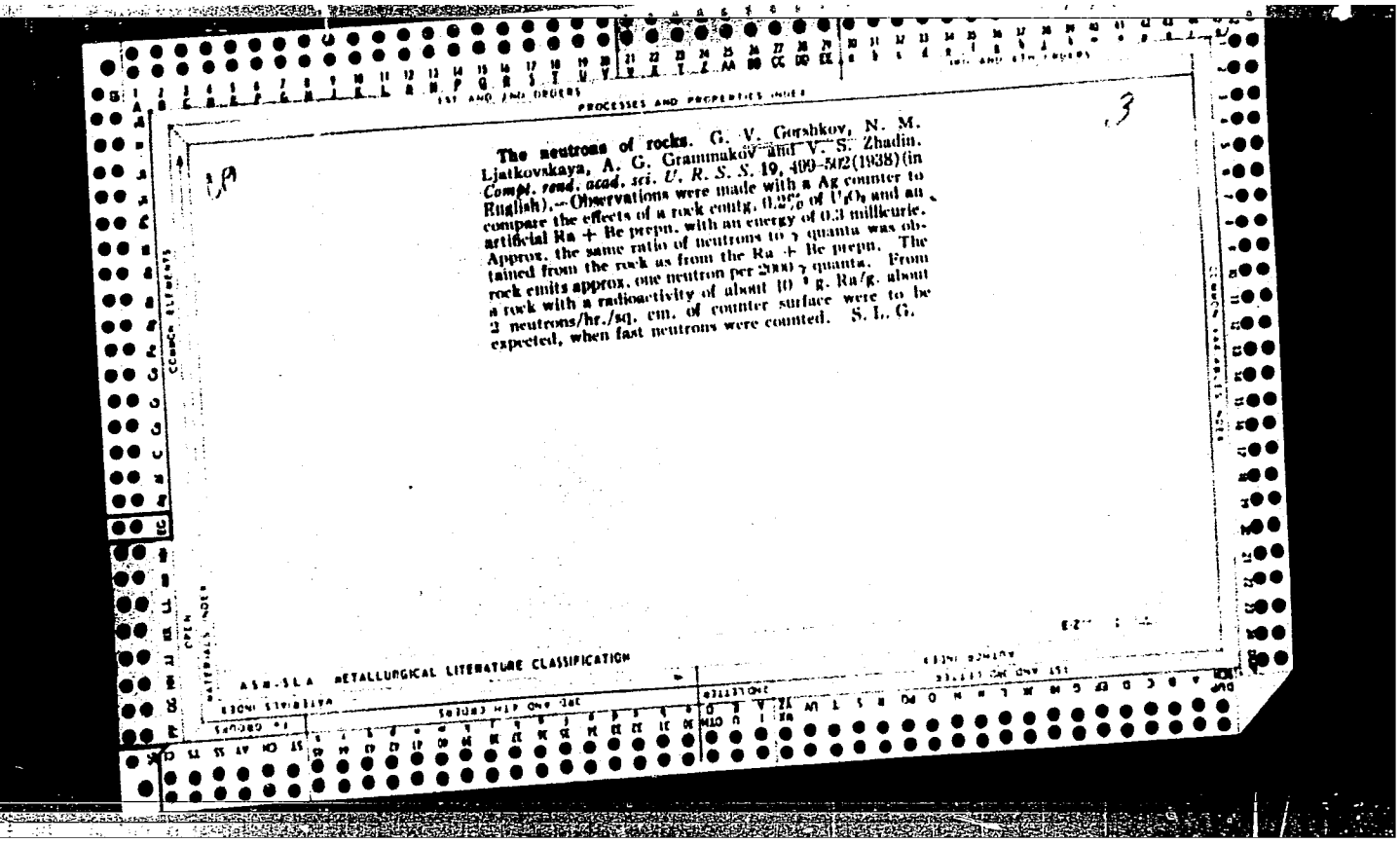


BC

Determination of radium, mesothorium 1, and radiothorium in sealed preparations. G. V. Gruschkov and V. N. Iowov (Compt. rend. Acad. Sci. U.R.S.S., 1937, 17, 15—16).—Mixtures can be analysed by measurement of the effects of their γ-radiations in expelling neutrons from D_2O (giving the Ra-Th content) and from Be (yielding the content of Ra-Th + Ra). Combination of the results with the total γ-ray activity yields the meso-Th 1 content. J. W. S.



The determination of the content of radium, mesothorium and radiothorium in weak preparations by secondary β-rays and connected Geiger-Müller counters. G. V. Gorshkov. *Trans. inst. Ital radium* (U. S. S. R.) 4, 83–114(in German, 115)(1938); cf. C. A. 32, 2029⁸. — The prepns. are sealed in glass tubes. The secondary β-rays excited by the γ-rays are passed through a Geiger-Müller counter and then through Al screens 0.083 0.81 mm. thick and then into the 2nd counter. The variation in penetrating power of the β-rays from the 3 elements permits their detn. The method gives an accuracy of about 15% in the best case, as compared with 1% when γ-rays are used, but it permits the use of concns. of the elements equiv. to 0.1 g. Ra. The electron-absorption curves vary with the concns. of the elements, and if the concn. of 2 elements in a mixt. differs 10-fold, errors of 3–4% are introduced. Filtration of the γ-rays by a 2-cm. Pb filter increases the hardness of the β-rays. The distance from the prepn. to the counter has little effect on the electron-absorption curve. H. M. Leicester



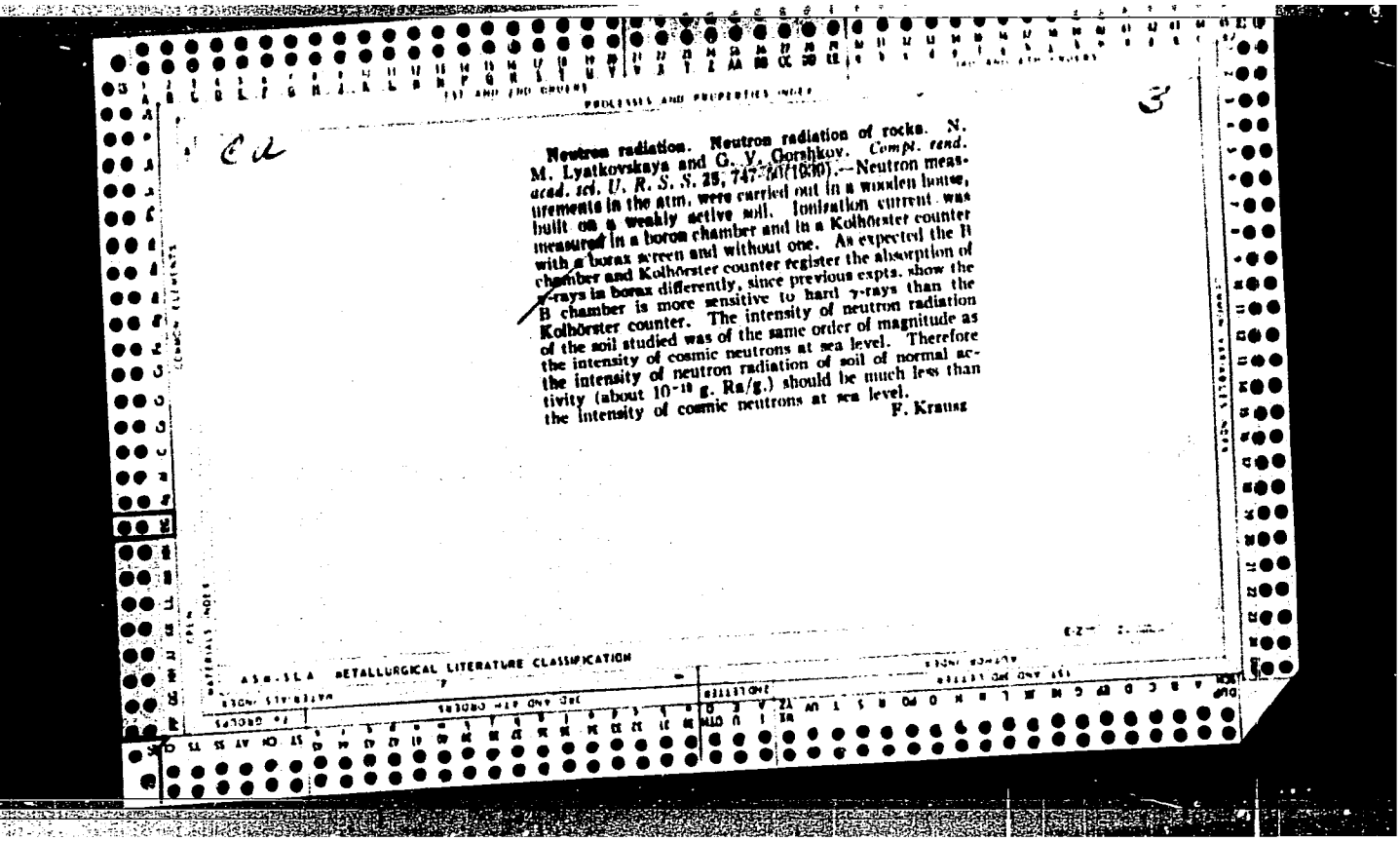
PROCESSES AND PROPERTIES INDEX

1A

3

The neutrons of rocks. G. V. Gorshkov, N. M. Ljatkovskaya, A. G. Grammakov and V. S. Zhadin. *Compt. rend. acad. sci. U. R. S. S.* 19, 409–502(1938)(in English).—Observations were made with a Ag counter to compare the effects of a rock contg. 0.2% of U_3O_8 and an artificial Ra + Be prepn. with an energy of 0.3 millicurie. Approx. the same ratio of neutrons to γ quanta was obtained from the rock as from the Ra + Be prepn. The rock emits approx. one neutron per 2000 γ quanta. From a rock with a radioactivity of about 10^{-9} g. Ra/g. about 2 neutrons/hr./sq. cm. of counter surface were to be expected, when fast neutrons were counted. S. L. G.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Neutron radiation. Neutron radiation of rocks. N. M. Lyatkovskaya and G. V. Gorshkov. *Compt. rend. acad. sci. U. R. S. S.* 25, 747–50 (1939).—Neutron measurements in the atm. were carried out in a wooden house, built on a weakly active soil. Ionization current was measured in a boron chamber and in a Kolhörster counter with a borax screen and without one. As expected the B chamber and Kolhörster counter register the absorption of γ-rays in borax differently, since previous expts. show the B chamber is more sensitive to hard γ-rays than the Kolhörster counter. The intensity of neutron radiation of the soil studied was of the same order of magnitude as the intensity of cosmic neutrons at sea level. Therefore the intensity of neutron radiation of soil of normal activity (about 10^{-12} g. Ra/g.) should be much less than the intensity of cosmic neutrons at sea level.

F. Kraus

GORSHKOV, G. V.

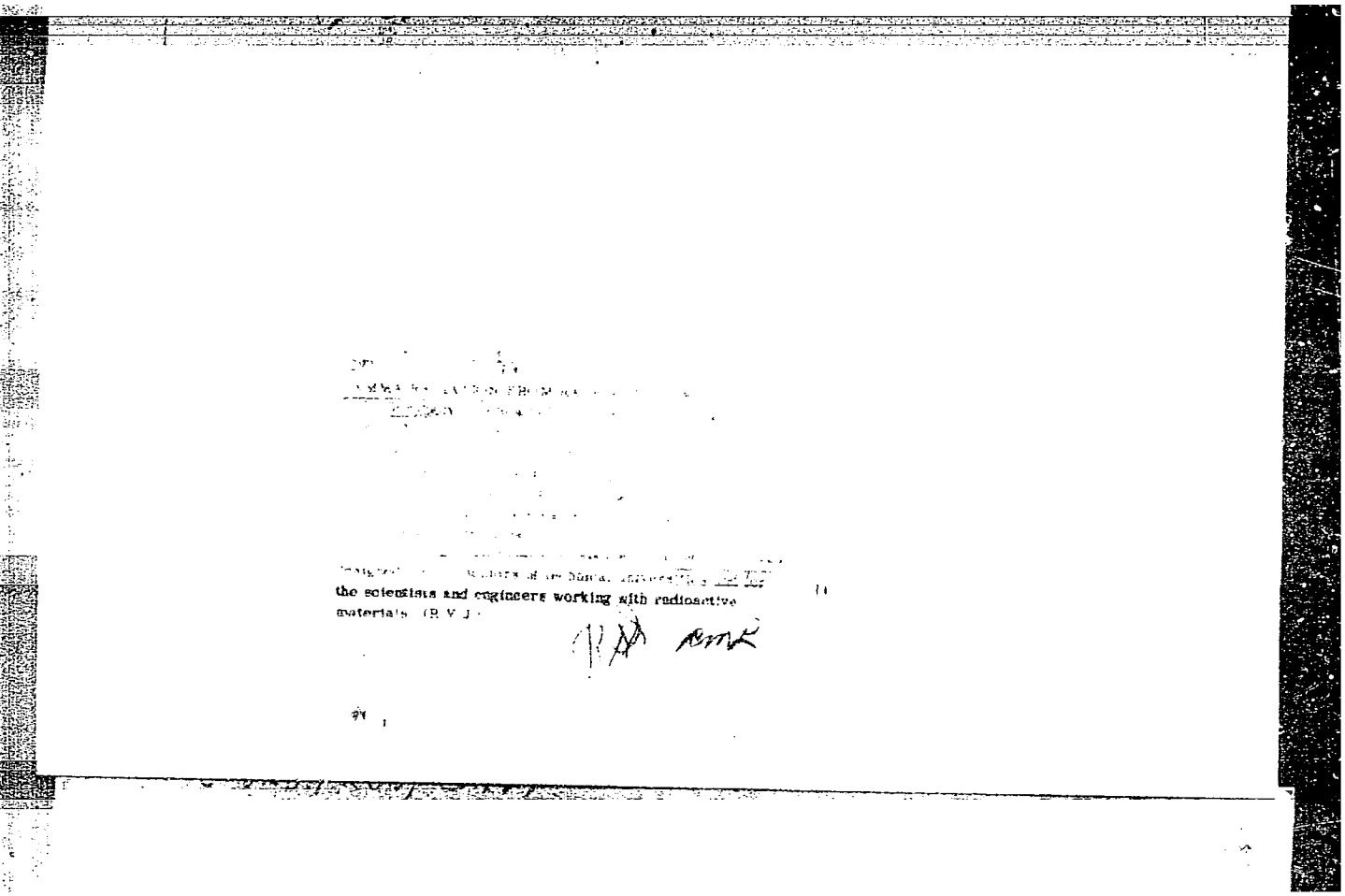
USSR/Nuclear Physics - Gamma Rays Mar 1947
Neutrons - Measurement

"Neutron Well Logging by Gamma Rays," G. V. Gorshkov, N. M. Liatkovskaya, 4 pp

"CR Acad Sci" Vol LV, No 7

Experimental measurement of the effect produced by the gamma rays in the ionization chamber of the logging instrument, which registers the thermal velocity neutrons directly.

8T50



the scientists and engineers working with radioactive
materials (R V J

~~GORSHKOV, G.V.~~ GORSHKOV, G.V.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1803
AUTHOR GORŠKOV,G.V., ŠIMANSKAJA,N.S.
TITLE On Calorimetric Measurements of Preparations of Naturally Radioactive Families.
PERIODICAL Atomnaja Energija, 1, fasc.5, 86-93 (1956)
Issued: 1 / 1957

The preparations themselves can be liquid or mixed with other non-active substances which, in some cases, are highly absorbent. The effect of absorption and of self-absorption can mostly not be estimated, for which reason the accuracy of measurements mostly does not go beyond from 2 to 3%. Even greater errors are committed on the occasion of the determination of the radioactivity of preparations by comparison with a gauging preparation of different origin.

On the occasion of calorimetric measurements of naturally radioactive preparations the authors were faced with the lack of complete data in modern tables of radioactive constants (e.g. J.HOLLANDER, J.PERLMAN, G.SEABORG, Rev.Mod.Phys. 25, 429, (1953). The tables above all contain no detailed information concerning the energies of gamma rays and their relative and absolute intensities. Furthermore, there are no data concerning the number of conversion electrons and the average energies of β-spectra. It is for this reason that the authors carefully analyzed all existing data on energies and on the radiation yields of the elements of the three naturally radioactive families. By the critical investigation of a great number of experimental works it was possible to determine the energy E_i for each

Atomnaja Energija, 1, fasc. 5, 86-93 (1956) CARD 2 / 2 PA - 1803

element as well as to determine the total "thermal" energies E corresponding to one act of decay of the preparations of Ra, MsTh, RaTh, and Ac which are in equilibrium. For the radium preparations also the corrections for the increase of the heat effect caused by the accumulation of RaE and Po^{210} was computed. Knowledge of all these quantities made calorimetric measuring of the absolute activity of many different preparations of naturally radioactive families possible. For this purpose double calorimeters of the static type were used. A table shows the measuring results of some Ra-, RaTh- and Ac-preparations. The following measurements were furthermore carried out by the calorimetric method: The relations between the milligram equivalent and the data in millicurie for the RaTh- and Ac-isotopes which are in equilibrium; these relations are of importance in the practice of ionization measuring. With the conditions usual in the USSR for ionization measuring (lead filter of 5 mm thickness and standard chamber SGM-1) the following results are obtained: 1 mg-equ RaTh = 1,29 $\pm$ 0,02 millicurie RaTh, 1 mg-equ. Ac = 10,0 $\pm$ 0,5 millicurie Ac), the content of radioactive substances on neutron sources of the type (x_α + Be), the content of Ra and MsTh in radium-mesothorium preparations. The calorimetric method is not suited for radium-mesothorium preparations with unknown time of production ("age"), but it is well suited for the determination of the composition of "young" preparations.

INSTITUTION:

RUMANIA/Nuclear Physics - Installations and Instruments. Methods of Measurement and Research C-2

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 7481

Author : Bak M.A., Gorshkov G.V., Matviyenko V.I., Petrzhak K.A., Romanov Yu.F.

Inst : Radium Institute, Academy of Sciences, USSR, Leningrad

Title : Radon Neutron Sources

Orig Pub : Bul. Inst. politechn. Iasi, 1957, 3, No 1-2, 47-54

Abstract : By measuring the spatial distribution of theneutron density in H_2O, the authors have determined the power and the average energy of the neutron sources Rn-Be, Rn-B, Rn-C, Rn-CaF_2, Rn-Mg, Rn-Al, and Rn-Si (the α n reaction). The absolute neutron yield from the various sources was determined by comparing the integral distributions of the slowed-down neutrons from the investigated and from a standard Ra-Be source. The mean energy of the neutron spectra was estimated from the magnitude of the relaxation length (L), determined from the measurements of the distribution of the density of the

Card : 1/2

15-1957-10-14144

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 124 (USSR)

AUTHORS: Aydarkin, B. S., Gorshkov, G. V., Grammakov, A. G., Zhadin, V. S., Kolchina, A. G.

TITLE: A Method of Determining Beryllium in Ores by Photoneutrons (K metodike opredeleniya berilliya v rudakh po fotoneytronam)

PERIODICAL: Tr. Radiyev. in-ta AN SSSR, 1957, vol 5, Nr 2, pp 89-93

ABSTRACT: Neutron radiation, produced by bombarding beryllium-bearing material with gamma rays of sufficient energy, was used for bonbarding the target. A comparison of the radioactivity of a standard with that of a sample introduced in the target makes it possible to calculate the concentration of Be in the sample. A vial containing 48.5 mg of Ra-equivalent serves as the gamma-ray source. Silver is used for the target. Experimental studies have shown that for a given strength of gamma radiation the introduced radioactivity, within sufficiently wide

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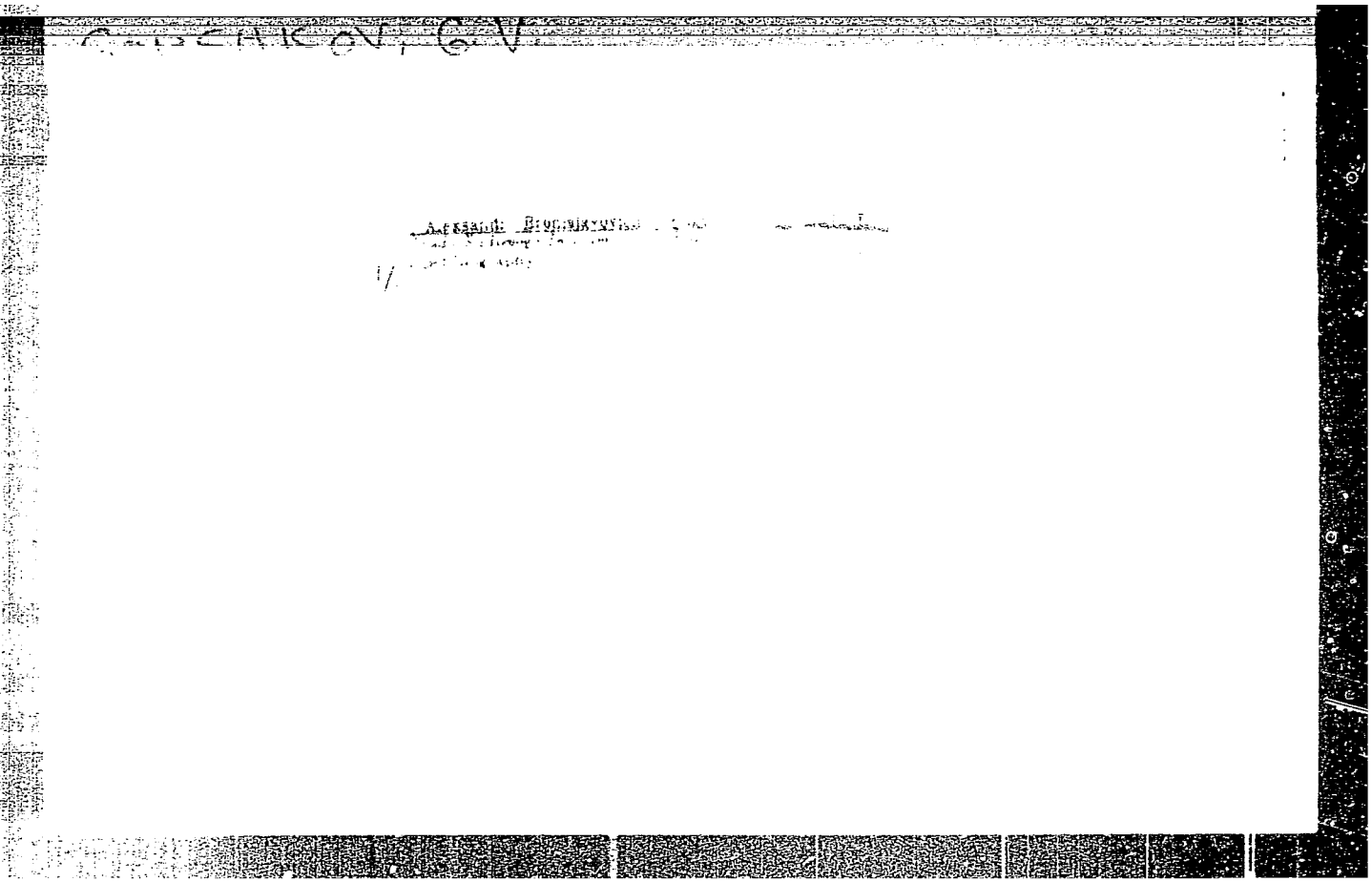

GORSHKOV, G.V.; ORBELI, M.L. [deceased]

Analysis by the ionization method of β-and γ-radiation of mesothorium preparations of different age. Trudy Radiev. inst. AN SSSR 6:29-33 '57. (MIRA 11:2)

(Mesothorium)
(Radioactivity--Physiological effect)
(Ionization chambers)

Gorshkov, G. V.

20-2-13/50

AUTHORS: Gorshkov, G. V. , Matviyenko, V. I.

TITLE: The Yield of Neutrons From the Sources Rn + B, Rn + C, Rn + CaF_2, Rn + Mg, Rn + Al, Rn + Si, Rn + SiO_2, Rn + Granite (Vykhod neytronov iz istochnikov Rn + B, Rn + C, Rn + CaF_2, Rn + Mg, Rn + Al, Rn + Si, Rn + SiO_2, Rn + Granit)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 2, pp. 211 - 212 (USSR)

ABSTRACT: Neutrons are created by the irradiation of light elements by the α -particles of natural radioactive substances. The most important characteristics of these neutrons sources is their yield. The present paper gives the results of the investigation of their yield and the other quantities which characterize the radon-neutron sources. All sources were produced as cylindrical glass ampules with a diameter of 20 mm and a height of 40 mm. These ampules were then filled completely with the powders of the target material. Beryllium, boron, carbon, calcium fluoride, magnesium, aluminum, silicon, silicon dioxide and 1,3 billion years old granite were used as filling material. The neutron yield was measured also on ampules without filling material for boron glass and glass without boron .

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The Yield of Neutrons From the Sources Rn + B, Rn + C, Rn + CaF_2, Rn + Mg, Rn + Al, Rn + Si, Rn + SiO_2, Rn + Granite 20-2-.13/50

The total number of the neutrons emitted by the neutrons was measured by means of two methods: with an all-wave boron counter and by recording the density distribution of the slow neutrons in a water tub. Because of the α -particles of the RaC' the yield of neutrons grows with varying rapidly in the case of the various elements. By means of the second method it was possible to check the boron counter and to increase the accuracy of measurements. The yield of radon ampules was taken as neutron background, which was filled with zinc powder, selenium powder and cadmium powder. The relative and the absolute yield was determined for all sources. For the purpose of controling the reproducibility of the entire process of production and the measurements the experiments were repeated. These control tests confirmed the previously obtained results within the limits of measuring errors. The experimental results obtained by this paper are shown in a table. There are 1 table and 2 Slavic references.

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The Yield of Neutrons From the Sources Rn + B, Rn + C, Rn + CaF_2, Rn + Mg, Rn + Al, Rn + Si, Rn + SiO_2, Rn + Granite 20-2-13/50

ASSOCIATION: Radium Institute imeni V. G. Khlopin AN USSR
(Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR)

PRESENTED: May 16, 1957, by A. P. Vinogradov, Academician

SUBMITTED: November 2, 1956

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Gorshkov, G. V., Kodyukov, V. M. SOV/89-5-1-10/28

TITLE: The Absorption of γ-Radiation From a Point Source and From Extended Sources by Water (Pogloshcheniye vodoy γ-izlucheniya ot tochechnykh i ob"yemnykh istochnikov)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 1, pp. 71-73 (USSR)

ABSTRACT: The law of the absorption of γ-rays from an extended and from a point source of Na^{24} and Au^{198} was measured experimentally. The extended source consisted of an aqueous solution of the aforementioned activities which were located in a container having the shape of a truncated cone. Above it there was a cylindrical container (Ø and height 2 m), which was filled with water. The dosage output was measured by means of a special chamber. Measuring results are represented by curves which represent the dependence existing between the absorption factor $K = P_o/P_x$ and the thickness of the layer of water. In order to be better able to survey the absorption of γ-rays emitted by an extended source absorption tests are at present carried out with various different materials and with different spectral compositions of

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the γ-sources. There are 2 figures and 5 references, 4 of which are Soviet.

SUBMITTED: January 24, 1958

1. Gamma rays--Absorption 2. Gamma rays--Measurement
3. Gamma rays--Sources 4. Water--Absorptive properties

SOV/56-34-3-39/55

AUTHORS: Gorshkov, G. V. , Gritchenko, Z. G. , Shimanskaya, N. S.

TITLE: The Calorimetric Determination of the Half-Life of Ra^{226} (Kalorimetricheskoye opredeleniye perioda poluraspada Ra^{226})

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol. 34, Nr 3, pp. 756 - 757 (USSR)

ABSTRACT: First, brief reference is made to some previous works dealing with the same subject. The authors of the present report carried out careful calorimetric measurements on 3 equilibrated radium preparations which were liberated from possible contaminations by means of additional crystallization. The purity of these preparations was controlled by means of the spectroscopic method. The results of the immediate weighing of the radium preparations prior to their sealing, their radium-content and the results of the calorimetric measurements carried out by means of a double static calorimeter, are contained in a table. The last column of the table contains the values found here for $Q_{\alpha+\beta}/p$ - the

Card 1/3

The Calorimetric Determination of the Half-Life of Ra^{226}

thermal effect of the α- and β-radiation of 1 g radium. Calculating these values, the absorption of the γ-rays in the preparation itself (self-absorption), in the protective container, in the glass of the ampules and within the walls of the calorimetric cylinder, were taken into consideration. Also the increase of the thermal effect due to the accumulation of Po^{210} and RaE in the preparations was taken into account. ε (the energy liberated in the calorimeter in a process of decay) was calculated on the basis of the last experimental data on the α- and β-spectra of the elements of the radium-series for an equilibrated preparation of Ra^{226}. This energy amounted to 25.335 MeV ($\pm$ 0.3 %). Utilizing this value, the authors found the value T = 1577$\pm$9 years for the half life of Ra^{226}. Hence results the value z = 3.71 $\pm$ 0.02.10^{10} decay-processes/sec.g. for the specific activity. Further measurements of these important values z and T for Ra^{226} with the methods discussed here and also by other methods, would be desirable. There are 1 table and 10 references, 4 of which are Soviet.

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SOV/56-34-3-39/55

The Calorimetric Determination of the Half-Life of Ra^{226}

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR
(Radium Institute AS USSR)

SUBMITTED: December 6, 1957

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Gorshkov, G.V.

PHASE I BOOK EXPLOITATION SOV/3503

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol. 9) Moscow, Izd-vo AN SSSR, 1959. 287 p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: G.N. Aron; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1955 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several eV up to hundreds of MeV. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles are concerned with problems of method. The authors provide a complete description of the construction of equipment and of the results of tests performed under laboratory conditions. No personalities are mentioned. References accompany individual articles.

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21(4,8) PHASE I BOOK EXPLOITATION SOV/3415

Gorshkov, Georgiy Vasil'yevich

Gamma-izlucheniye radioaktivnykh tel i elementy rascheta zashchity ot izlucheniya (Gamma-radiation of Radioactive Bodies and Fundamentals of Calculating Protection Against Radiation) Moscow, Izd-vo Akademii nauk SSSR, 1959. 292 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Radiyevyy institut

Ed.: K. K. Aglintsev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: N. V. Travin; Tech. Ed.: M. Ye. Zendel'

PURPOSE: This book is intended for scientists and engineers working with radioactive substances. It may be used as a textbook by students in technical colleges and institutions of higher education

COVERAGE: The book contains basic information on the passage of gamma-radiation through various substances, gives formulas and graphs for finding the attenuation coefficients of gamma-rays in

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various materials, describes in detail methods of computing the strength of radiation dosage from radioactive bodies of various size and shape, and also gives computation methods, tables and graphs for determining the thicknesses of protective materials necessary against different radioactive sources, including fission products. There are 129 figures and 41 tables (excluding the supplementary tables which make up the appendices). No personalities are mentioned. There are 144 references: 60 Soviet, 60 English, 15 French, and 9 German.

TABLE OF CONTENTS:

Gamma-radiation (Cont.) SOV/3415

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Gamma-radiation (Cont.)

SOV/3415

AVAILABLE: Library of Congress (QC 490.G62)

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TM/mmh
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Gorshkov, G.V.

PHASE I BOOK EXPLOITATION SOV/3589

Sbornik radiokhimicheskikh i dozimetricheskikh metodik (Collection of Radio-Chemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): N.G. Gusev, U.Ya. Margulis, A.N. Marey, N.Yu. Tarasenko, Yu.M. Shtukkenberg; Ed. (Inside book): V.I. Labaznov; Tech. Ed.: A.I. Zakharova.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

COVERAGE: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods of measuring external streams of x- and gamma-radiation, and methods of individual dosimetric monitoring; (5) Absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Ya.V. Sivintsev and D.P. Shirshov. References appear at the end of each chapter.

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21(8) SOV/115-59-3-24/29

AUTHORS: Gorshkov, G.V., Karavayev, F.M., and Shimanskaya, N.S.

TITLE: The Determination of the Radium Content in Radium Compounds (Ob opredelenii soderzhaniya radiya v radiyevykh preparatakh)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 3, pp 52-53 (USSR)

ABSTRACT: The radium content of radium compounds is mainly determined by the ionization method, or more exactly, its gamma equivalent is determined. The ionization effect of the radiation of the compound under investigation is compared to that of a standard with a known radium content. At VNIIM, two state standards, X and XI, are used, whose radium content was set equal (for 1957) to 29.37 and 14.27 mg radium elements. The self-absorption of the gamma radiation within the radiation source itself is not considered sufficiently. Although lead filters are used, which are 2 cm thick at VNIIM, whereby the soft gamma radiation is eliminated, the error can attain a consider-

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The Determination of the Radium Content in Radium Compounds

able magnitude, if the differences of self-absorption are not taken into consideration. The authors determined the accuracy of contemporary ionization methods used for determining the radium content. For this purpose, three pure radium compounds were available which were to be used for the calorimetric determination of the radium half decay period (Ra^{226}). The results of these investigations and measurement results of VNIIM and the Radiyevyy institut AN SSSR -RIAN- (Radium Institute AS USSR) are shown in one table. The calculations performed by the authors show that the difference of the self-absorption of the gamma radiation of radium in 15 mg $RaCl_2$ and 150 mg $RaBr_2$ is of a considerable magnitude. The effective self-absorption in standard XI was found to be 0.9% while it was 1.7% in 150 mg $RaBr_2$, whereby the difference was 0.8%. The authors recommend to establish new standards in the USSR with a radium content of 1, 5, 10, 25, 100, 200, 500 mg, whereby the error

The Determination of the Radium Content in Radium Compounds

caused by the different self-absorption were reduced to a greater extent. In addition they recommend the application of lead filters with thicknesses of not less than 1-1.5 cm. Until new state standards are created the authors recommend the application of a formula for obtaining an accuracy of 0.3-0.5%

$$p = I\ (1.006 + 3.6 \cdot 10^{-3}\ \sqrt[3]{I})$$

where I is the milligram-equivalent of the compound under investigation. A footnote says that the standards X and XI are regarded also as secondary international standards. There are: 1 table and 6 references, 3 of which are Soviet and 3 English.

BAK, M.A.; GORSHKOV, G.V.; MATVIYENKO, V.I.; PETRZHAK, K.A.; SHIMANSKAYA, N.S.

Determination of the neutron yields of the sources Ra + Be, Ac + Be, MsTh + Be, and P + Be. Trudy Radiev.inst.AN SSSR 9:120-125 '59. (MIRA 14:6)

(Neutrons)

21(8) SOV/89-6-4-14/27

AUTHORS: Gorshkov, G. V., Shimanskaya, N. S.

TITLE: Total Energy of the Radioactive Radiation of a Radium Preparation (Ra^{226}) in Equilibrium (Polnaya energiya radioaktivnogo izlucheniya ravnovesnogo preparata radiya (Ra^{226})

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 4, pp 474-475 (USSR)

ABSTRACT: In 1935 I. Zlotovskiy calorimetrically measured the total energy of all radioactive radiations radiated from a radium preparation in equilibrium. This value was now checked with the help of 3 sources the exact radium content (Ref 4) of which was known. This measurement was carried out with the static γ-calorimeter (Ref 5) the tungsten walls of which absorbed ~93% of the γ-radiation of Ra-Ra(B+C). For q (total energy) the value 138.9 ± 0.7 cal/h.1g Ra was measured. It is by 0.7% lower than that obtained by Zlotovskiy. This lower value agrees well with expectations. Individual data, from which q was calculated, are shown by a table. Ye. K. Smirnova produced the radium preparations. Yu. S. Martynov took part in the measurements. There are 1 table and 6 references, 4 of which are Soviet.

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BAK, M.A.; GORSHKOV, G.V.; MATVIYENKO, V.I.; PETRZHAK, K.A.; ROMANOV, Yu.F.

Radon neutron sources. Trudy Radiev.inst.AN SSSR 9:107-112 '59.
(MIRA 14:6)

(Neutrons) (Radon)

82737
S/089/60/009/002/009/015
B006/B056

21.1310

AUTHORS: Gorshkov, G. V., Kodyukov, V. M.

TITLE: Attenuation of Gamma Radiation of Volume Sources in Iron and Lead

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 2, p. 139

TEXT: The attenuation of gamma radiation in iron and lead was studied on a volume source, which was a metal tank shaped like the frustum of a cone. The tank was filled with an aqueous solution of colloidal gold (Au^{198}, E = 0.411 Mev) and NaCl (Na^{24}, E_1 = 1.38 Mev, E_2 = 2.76 Mev). The dose rate was measured by means of an air-wall ionization chamber. The experimental conditions are the same as described in a previous paper (Ref. 1). The results obtained by the experiments are shown in diagrams (attenuation factor K as a function of the number of path lengths μl). $K = P_0/P_x$ holds, where P_x and P_0 are the dose rates with and without absorber. From the curves obtained and the results obtained in Ref. 1

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Attenuation of Gamma Radiation of Volume Sources in Iron and Lead

S/089/60/009/002/009/015
B006/B056

the following conclusions may be drawn: 1) The law of attenuation of the gamma radiation of a volume source is essentially analogous to that of a point source if the build-up factor is taken into account ($B = K_{theor}/K_{exp}$). 2) The build-up factor is smaller for a volume source than for a point source; its amount depends on the shape of the source, the spectral composition of the gamma radiation, and the absorber. 3) The build-up factor increases with decreasing gamma energy and decreases with an increase of the atomic number of the absorber. 4) In absorbers with high atomic numbers (lead) the build-up factor for a volume source is nearly equal to unity (with $\mu l < 3$). 5) As a protection from the gamma radiation of a volume source, it is advisable to use materials with high atomic numbers, or, in the case of a composite shield, to arrange the material with lower atomic number to be nearer to the source. There are 4 figures and 2 Soviet references.

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Attenuation of Gamma Radiation of Volume Sources in Iron and Lead

82737
S/089/60/009/002/009/015
B006/B056

SUBMITTED: February 10, 1960

4

Card 3/3

AUTHORS: Gorshkov, G. V., Khorushko, S. P., Tsvetkov, O. S.

S/020/60/131/04/059/073
B011/B002

TITLE: Comparison Between Neutron Radiation in the Atmosphere and the Earth's Crust

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 4, pp 933-935 (USSR)

ABSTRACT: The authors give a survey of investigations of neutron radiation since 1937. Since they now dispose of better apparatus than they did then, the authors attempt to compare the intensity of cosmic neutrons at sea level with the neutrons in the rocks of the Leningrad underground. For measuring the neutron flux, they designed and constructed a scintillation counter consisting of a disk-shaped slow neutron detector (Ref 16), 153.5 mm in diameter, and a photoelectron multiplier of the type FEU-2B (150 mm in diameter). The pulses coming from the multiplier were fed into a circuit containing electron tubes which intensify and analyze simultaneously and were recorded by a conversion device (Fig 1). The elements of the block diagram illustrated were developed mainly on the basis of the system of a standard neutron counter of the type SCh-3. The measurements were carried out: (1) in the city of Zelenogorsk, (2) in the harbor of Zelenogorsk, (3) in a station of the Leningrad underground in a depth of 70 m. The counting rate

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B014/B011

3.9000
24.6800

AUTHORS: Gorshkov, G. V., Lyatkovskaya, N. M.

TITLE: Emission of Neutrons by Rocks

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 1, pp. 92-94

TEXT: In the paper under review, the authors try to calculate the rate of neutron production in the rocks of the earth crust, and to estimate the absolute neutron intensity on the strength of data published on the production rate of neutrons in different materials by taking account of cosmic radiation. Those three processes near the earth surface are mentioned in which neutrons are produced. Table 1 compiles the rates of neutron production in different materials, and the intensity of cosmic thermal neutrons is given. In order to estimate the rate of neutron production in the earth, it was necessary to calculate the rate of neutron production by nuclear processes occurring in the earth crust. Here, the authors refer to results obtained by V. I. Matviyenko, and a neutron output from granite is found to be $80.7 \cdot 10^3$ neutrons/sec.curie on an irradiation with α-particles. The authors obtained a neutron production per second and gram of granite

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Emission of Neutrons by Rocks

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amounting to $1.5 \cdot 10^{-8}$. Such neutrons were caused by the spontaneous decay of U^{238}. $2.4 \cdot 10^{-7}$ neutrons/sec.g are produced by the radium content. $5 \cdot 10^{-7}$ neutrons/sec.g are produced by the α-radiation of the thorium family. It results therefrom that in granite, by nuclear reactions in the earth, approximately 50 times less neutrons are produced than in paraffin by cosmic radiation at sea level. Hence, a neutron flux of roughly 5 neutrons/cm^2 per day must be expected in granite rocks. This flux is beneath the measuring limit of modern instruments. The calculations made here show that the neutron flux in rocks with higher content of radioactive elements can be measured with modern instruments. The same may be possible with an increased content of some lighter elements. There are 1 table and 30 references: 7 Soviet, 15 American, 3 German, 1 Canadian, 1 Australian, 1 British, and 1 Swiss.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR). Leningradskiy elektrotekhnicheskiy institut im V. I. Ul'yanova (Lenina)(Leningrad Institute of Electrical Engineering imeni V. I. Ul'yanov (Lenin))

S/048/61/025/004/021/048
B104/B201

26, 2244

AUTHORS: Gorshkov, G. V., Grebenskiy, B. S., Khormushko, S. P., and Tsvetkov, O. S.

TITLE: Dispersion detector for fast neutrons

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 504-505

TEXT: The present paper has been read at the 9th Conference on Luminescence (Crystal Phosphors), Kiyev, June 20-25, 1960. The detector considered here is made of grains of a ZnS-Ag scintillator, which are uniformly distributed in a medium containing hydrogen. The scattering of neutrons in the detector leads to the formation of recoil protons which, when hitting a scintillator, result in a scintillation which is recorded by a photomultiplier. The detectors considered here were prepared by polymerization of styrene and methyl methacrylate with ZnS-Ag. The resulting detectors were up to 300 mm in diameter and had the shape of hollow spheres, cylinders, hemispheres, etc. The grain size of the scintillator was 12-25 μ, the afterglow had a duration of about 10^{-4} seconds, the intensity

Dispersion detector...

maximum of emission ranged between 4100 and 4500 A, which was in good agreement with the maximum of spectral sensitivity of the antimony cesium photocathode of the multiplier. The recording efficiency may be represented in the form $\varepsilon = \varepsilon_\sigma \varepsilon_p \varepsilon_\nu$. Here, ε_σ denotes the scattering efficiency of neutrons of the detector, ε_p the hitting efficiency of protons (to hit a ZnS-Ag grain), and ε_ν is the efficiency of the recording of scintillations. ε as a function of the neutron energy E_n, of the grain size and of the concentration C_m of the scintillator, of thickness, etc., is discussed. Relation $\varepsilon_p = I - \exp(-k(r)C_V R_n)$ is derived, where C_V denotes the volume concentration of ZnS-Ag, R_n is the proton range for proton energy E_n, $k(r)$ is dependent upon the energy distribution of the recoil protons and of the grain size of the scintillator. It is also obvious that there is an optimum thickness l_o of the detector, that is dependent upon the optical properties of the detector, on E_n, and the discrimination threshold. For a detector with $C_m = 25$ % the optimum thickness is equal to 10 mm, when recording the neutrons from a Po_α + Be source, and at a discrimination of gamma radiation with $3 \cdot 10^4$ quanta$\cdot cm^{-2} sec^{-1}$. There are 1 figure and 8 references: 4 Soviet-bloc and 4 non-Soviet-bloc.

Card 2/3

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B102/B104

21.5210

AUTHORS: Gorshkov, G. V., Zyabkin, V. A., Tsvetkov, O. S.

TITLE: Neutron yield of the (α, n)-reactions from Be, B, C, O, F, Mg, Al, Si, and granite induced by polonium α-particles

PERIODICAL: Atomnaya energiya, v. 13, no. 1, 1962, 65 - 67

TEXT: Five years ago the authors used ampoules containing radon as radiation sources to determine neutron yields and energies (Dokl. AN SSSR, 116, no. 2, 211, 1957). In the present experiments the only alpha emitter contained in such ampoules is the radon decay product polonium, along with the target substances. The alpha-particle energy is 5.298 Mev. Boric acid, enriched in B^{10} up to 90% and silver-activated zinc sulfide were used, together with a photomultiplier, as slow-neutron detector. For the purpose of the measurements the ampoule was placed in an air-filled cavity within a lump of paraffin, above the detector and photomultiplier, all enclosed by the paraffin. To eliminate the cosmic background all measurements were repeated in the earth at a depth equivalent to 200 m of water. The paraffin 25 cm thick served as a shield against the neutron radiation of the rock.

Card 1/2

GORSHKOV, G.V.; ZYABKIN, V.A.; TSVETKOV, O.S.

Neutron yield from nitrogen, oxygen, air, and water under the action of radium C' α-particles. Atom. energ. 13 no.5:475-476 N '62. (MIRA 15:11)
(Neutrons) (Radium) (Alpha rays)

G.V. GORSHKOV, O.S. TSVETKOV (USSR)

"Neutron radiation of some uranium and thorium minerals."

Report presented at the Conference on Chemistry of the Earth's Crust, Moscow, 14-19 Mar 63.

PERMYAKOV, V.M.; GORSHKOV, G.V., otv. red.; ARON, G.M., red.izd-va; ZAMARAYEVA, R.A., tekhn. red.

[Radioactive emanations] Radioaktivnye emanatsii. Moskva, Izd-vo AN SSSR, 1963. 174 p. (MIRA 16:12)
(Radioactive substances)

L 10675-63
EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/AFWL/SSD--Pu-4

ACCESSION NR: AP3002259 S/0089/63/014/006/0550/0554

AUTHOR: Gorshkov, G. V.; Tsvetkov, O. S. 61

TITLE: Neutron yield from the reaction (Alpha, n)^{19} with Be, B, C, O, F, Na, Mg, Al and Si under the action of alpha particles from thorium, uranium and their decay products

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 550-554

TOPIC TAGS: Be, B, C, O, F, Na, Mg, Al, Si, Alpha particles, thorium, uranium, neutron yield, (Alpha, n) reaction

ABSTRACT: The number of neutrons emitted by the sources were measured with scintillation counters described by the authors (Atomnaya energiya, v. 13, 1962, 65). Measurements were made underground at a depth of 200 m. water equivalent. The neutron intensity of the sources was 0.5 to 10 neutr/sec x steradian. The light elements bombarded were in their natural isotopic composition; impurities did not exceed 1%. A semiempirical dependence of the yield on the weight composition of the sources was found, also an empirical dependence of the yield on the alpha particles energy. The results of the investigation are essential for the estimation of the natural irradiation of ores and minerals. "The authors express their gratitude to E. G. Zaletskiy and S. A. Timofeyev for help with

Card 1/2

L 10674-63
EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/AFML/SSD--Pu-4

ACCESSION NR: AP3002258 S/0089/63/014/006/0544/0549

AUTHOR: Gorshkov, G. V.; Zyabkin, V. A.; Tsvetkov, O. S.

TITLE: Neutron yield from some materials on bombardment with radon alpha particles and their decay products

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 544-549

TOPIC TAGS: neutron yield, radon alpha particles, ores, minerals

ABSTRACT: The neutron yield was measured from the reaction (Alpha, n) with some light elements, chemical compounds, minerals, and ores. The apparatus used is described. The alpha particles were emitted by Rn + RaA + RaC prime. The ratios of the yields of Rn + RaA to Rn + RaA + RaC prime were also determined. The experimental values of the yield from some ores and minerals are compared with the computed ones. It is shown that the neutron yields from ores and minerals are due mainly to those from Al and Si. "The authors are grateful to A. M. Trofimov for the opportunity to conduct the work, and to Z. B. Svetovidov for help with electrical measurements." Orig. art. has: 2 figures, 2 tables, and 3 equations.

ASSOCIATION: none

Card 1/2

ZADONTSEV, Vladimir Ivanovich; KORSUNENKO, Anatoliy Afanas'yevich; NIKOLAYEV, Boris Nikolayevich; RYKOV, Mikhail Ivanovich; ZHIL'TSOV, I.F., kand. med. nauk, retsenzent; GORSHKOV, G.V., doktor tekhn. nauk, nauchn. red.; KVOCHKINA, G.P., red.; NIKITINA, M.I., red.

[Dosimetry of radioactive gases and aerosols on ships] Dozimetriia radioaktivnykh gazov i aerozolei na sudakh. Leningrad, Sudostroenie, 1965. 202 p. (MIRA 18:4)

GORSHKOV, G.V.; ZYABKIN, V.A.; TSVETKOV, O.S.

Neutron background over the earth's surface. Atom. energ. 17 no.6: 492 D '64 (MIRA 18:1)

GORSHKOV, I.

Beneficial help. Prof.-tekh.obr. 13 no.9:4 S'56. (MIRA 9:10)

1. Starshiy master raychikhinskogo tekhnicheskogo uchilishcha no.1. Amurskaya oblast'.
(Farm mechanization)

GORSHKOV, I.

A good thing develops further. NTO 5 no.7:31-33 Jl '63.
(MIRA 16:8)

1. Predsedatel' soveta Nauchno-tekhnicheskogo obshchestva Vsesoyuznogo nauchno-issledovatel'skogo instituta pod"yemno-transportnogo mashinostroyeniya.
(Hoisting machinery—Technological innovations)
(Conveying machinery—Technological innovations)

GORSHKOV, I.B., inzh.; KACHANOV, V.F., inzh.

Scientific technical conference on the manufacture of hoisting and conveying machinery. Vest.mashinostr. 42 no.7:83-85 Jl '62. (MIRA 15:8)

(Hoisting machinery) (Conveying machinery)

GORSHKOV, I.B., inzh.

Improving the reliability and durability of hoisting and conveying machinery. Mekh. i avtom. proizv. 18 no.7:54-56 Jl '64. (MIRA 17:9)

KOZLOV, A.I.; GORSHKOV, I.I.

Prospects for the manufacture of vanillin from lignin sulfonates. Gidrolliz. i lesokhim. prom. 11 no.4:24-25 '58. (MIRA 11:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizney i sulfitno-spirtovoy promyshlennosti.
(Vanillin) (Lignosulfonic acids)

Gorshkov, I.I.

KOZLOV, A.I.; GORSHKOV, I.I.

Assuring the drug industry a supply of vanillin. Med.prom. 12 no.2: 31-34 F '58. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(VANILLIN)

KOZLOV, A.I.; VAKAYEVA, M.S.; GORSHKOV, I.I.; BOBOVNIKOV, B.M.

Means of lowering the costs of furfurole produced by hydrolysis plants in operation. Gidroliz.i lesokhim.prom. 13 no.4:21-23 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut gidrolizhnoy i sul'fitno-spirtovoy promyshlennosti (for Kozlov, Vakayeva, Gorshkov).
2. Andizhanskiy gidrolizhnyy zavod (for Bobovnikov).
(Furaldehyde) (Hydrolysis)

NAUMOV, V.V., kand.ekon.nauk; DMITRIYEV, V.A., inzh.-ekonomist; KOZLOV, A.I., kand.ekon.nauk; GORSHKOV, I.I., inzh.-ekonomist

Economic efficiency of the use of ammonia base in the production of sulfite pulp. Bum.prom. 33 no.11:25-26 N '58.(MIRA 13:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyuloznoy i bumazhnoy promyshlennosti (for Naumov, Dmitriyev). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti (for Kozlov, Gorshkov).
(Woodpulp) (Amonia)

KOZLOV, A.I.; GORSHKOV, I.I.

Means for increasing labor productivity at hydrolysis plants.
Gidroliz.i lesokhim.prom. 15 no.3:1-2 '62. (MIRA 15:5)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirtovoy promyshlennosti.
(Hydrolysis) (Labor productivity)

KOZLOV, A.I.; GORSHKOV, I.I.

For a further improvement of economics in furfurol production. Gidroliz. i lesokhim. prom. 17 no.7:1-3 '64.
(MIRA 17:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti, Leningrad.

GORSHKOV, I.I.; KOZLOV, A.I.

Improve the organization of work in the hydrolysis industry. Gidroliz. i lesokhim. prom. 18 no.5:1-3 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.

GORSHKOV, I.M.

From the history of the beginnings of the oils and fats industry in Odessa. Masl.-zhir. prom. 29 no.5:45-46 My '63.
(MIRA 16:7)

(Odessa—Oil industries)

GORSHKOV, I. P.

Gorshkov, I. P. "The biology of Drascheia megastoma, the cause of drascheosis in horses", Sbornik rabot po gel'mintologii (Vsesoyuz. in-t gel'mintologii im. akad. Skryabina), Moscow, 1948, p. 98-108.

SO: U-3042, 11 March 53, (Letopis'nykh Statey, No. 10, 1949).

GORSHKOV, I. P.

Patologo- Antomicheskiye izmeneniya zheludka loshadey pri drashayoze "Works on Helminthology" on the 75th Birthday of K. I. Skryabin, Izdat, Akad. Nauk, SSSR, Moskva, 1953, page 166.

BAKHAREV, A.N.; GORSHKOV, I.S.; DOBRINSKIY, N.Ya.; MIKHALEVA, T.I., red.

[I.V.Michurin in the recollections of his contemporaries] I.V.Michurin v vospominaniiakh sovremennikov. Tambov, Tambovskoe knizhnoe izd-vo, 1963. 214 p. (MIRA 17:5)

GORSHKOV, I. S and BAKHAREV, A.

"The Works of the Great Transformer of Nature," Review of Soviet Press, 7 June 1950.

GORSHKOV, I. S.

Viticulture

Sowing of vine seeds; Sad i og. no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

1. GORSHKOV I. S.

2. USSR (600)

4. Nuts

7. Cultivation of nut-bearing trees. Les. i step 14 No. 11. 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

GORSHKOV, I.S.

Significance of planting fruit trees in shelterbelts. Trudy. TSGL 5:315-318 '53. (MIRA 12:11)
(Fruit trees) (Windbreaks, shelterbelts, etc.)

GORSHKOV, I.S.

One hundredth anniversary of I.V.Michurin's birth (1855-1955).
Bot.zhur.40 no.5:647-654 S-O '55. (MLRA 9:4)

1.Tsentral'naya geneticheskaya pledove-yagodnaya laboratoriya imeni I.V.Michurina, g.Michurinsk.
(Michurin, Ivan Vladimirovich, 1855-1935)

GORSHKOV, I.S.

Following Michurin's traditions in science. Bot.zhur.40 no.5: 680-692 S-O '55. (MLRA 9:4)

1.TSentral'naya geneticheskaya laboratoriya imeni I.V.Michurina, g.Michurinsk.
(Michurin, Ivan Vladimirovich, 1855-1935)

GORSHKOV, I.S., doktor sel'skokhozyaystvennykh nauk

Michurin's theory in action. Priroda 44 no.10:13-22 O'55.
(MLRA 8:12)

1. Direktor TSentral'noy geneticheskoy laboratorii imeni I.V.Michurina
(Fruit culture)

GORSHKOV, I.S.

Second generation in Michurin's varieties. Biul.nauch.-tekh. inform.TSGL no.1:33-43 '56. (MIRA 12:1)
(Fruit culture)

GORSHKOV, I.S.

For the introduction of field experiments in sowing corn at a soft-dough stage. Biul.nauch.-tekh.inform.TSGL no.2:3-6 '56. (MIRA 12:1)

(Corn (Maize))

GORSHKOV, I.S.

Results of work. Biul.nauch.-tekh.inform.TSOL no.2:51-57 '56. (MIRA 12:1)

(Fruit culture)

GORSHKOV, I.S.; NIKITIN, B.L.

Effect of soil electrization on yields and changes in the sugar content of beets and starch content of potatoes. Biul. nauch.-tekh. inform. TSGL no. 3:7-14 '57. (MIRA 11:8)
(Plants, Effect of electricity on)
(Potatoes)
(Sugar beets)

GORSHKOV, I.S.

For the development of plant breeding and horticulture. Trudy TSGL 6:16-28 '57. (MIRA 12:10)
(Fruit culture)

GORSHKOV, I.S.

Theoretical and practical achievements in remote hybridization of fruit and berry plants. Trudy TSGL 6:29-45 '57.
(MIRA 12:10)

(Fruit culture) (Hybridization, Vegetable)

IOBANOV, P.; BREZHNEV, D.; OL'SHANSKIY, M.; LYSENKO, T.; LISAVENKO, M.; SINYAGIN, I.; YAKUSHKIN, I.; PREZENT, I.; VARUNTSYAN, I.; KOLESNIKOV, V.; YEVTUSHENKO, A.; ZASYADNIKOV, T.; ALISOV, M.; UTEKHIN, A.; GORSHKOV, I.; BELOKHONOV, I.; VIDENIN, K.; KARPOV, G.; CHERNENKO, S.; BAKHAREV, A.; TIKHONOVA, A.; KUZ'MIN, A.; BUZULIN, G.; TOLMACHEV, I.; LYSYUK, Ye.; KHARITONOVA, Ye.; KUSHNIRENKO, M.; NOVOPAVLOVSKAYA, N.; ZHIRONKIN, I.; KATSURA, O.; KIRYUKHIN, I.; NIKITIN, B.; TSVETAYEVA, Z.; ARKHIPOV, B.; OSTAPENKO, V.; IVANOV, V.; BUTUZOV, V.; LUTKOVA, I.; TSVETAYEVA, Z.; ARKHIPOV, B.; OSTAPENKO, V.; IVANOV, V.; BUTUZOV, V.; LUTKOVA, I.

P.N. IAkovlev; obituary. Agrobiologiia no.6:119 N-D '57.
(MIRA 10:12)

(IAkovlev, Pavel Nikanorovich, 1898-1957)

GORSHKOV, Iosif Stepanovich; SAVZDARG, V.E., red.; FEDOTOVA, A.F., tekhn. red.

[Articles about fruit culture] Stat'i po plodovodstvu. Moskva, Gos. izd-vo sel'khoz.lit-ry, 1958. 507 p. (MIRA 12:1)

1. Rukovoditel' Tsentral'noy geneticheskoy laboratoriyey imeni I.V. Michurina (for Gorshkov).
(Fruit culture)

GORSHKOV, I.S.

Urgent problems in Soviet agriculture. Biul. nauch. inform. TSGL no.7/8:5-10 '59. (MIRA 13:1)
(Agriculture)

GORSHKOV, I.S., doktor sel'skokhozyaystvennykh nauk

Michurin's principles and methods of breeding as a basis of Soviet plant growing. Trudy TSGL 7:5-28 '61. (MIRA 15:10)
(Michurin, Ivan Vladimirovich, 1855-1935)
(Plant breeding)

GORSHKOV, K.; MELIKHOV, V.

Calculating norms for workers of the silica gel shop of the Voskresensk Chemical Combine based on the study of working time consumption by the method of observation. Biul. nauch. inform.: trud i zar. plata no.4:24-28 '59. (MIRA 12:6)
(Voskresensk--Chemical industries--Labor productivity)

L 05161-67

ACC NR: AP6011226 (A) SOURCE CODE: UR/0413/66/000/006/0065/0065

16
B

AUTHOR: Gorshkov, K. T.

ORG: none

TITLE: Levered load-hoisting equipment. Class 35, No. 179892

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 65

TOPIC TAGS: hoisting equipment, pneumatic device

ABSTRACT: This Author Certificate presents a levered load-hoisting equipment activated by a two-piston pneumatic cylinder mounted on the traverse of this equipment. The traverse is suspended from the hook of a crane. To improve the maneuverability, the traverse carries a cylinder of compressed air connected through a pipe to the pneumatic cylinder. The compressed air cylinder has two openings, one for each piston containing part of the pneumatic cylinder.

SUB CODE: 13/ SUBM DATE: 07Mar64

Card 1/1 vmb UDC: 621.86.061.3

GORSHKOV, L., mayor

Collective means of protection. Voen. znan. 39 no.4:36-38 Ap '63. (MIRA 16:6)

(Atomic bomb shelters)

GORSHKOV, L. A.

(3)

10638. Peat Composts—Excellent Resources for Increasing Yields. (Russian.) L. A. Gorshkov, A. A. Ziza, and K. N. Abalymov. *Sad i Ogorod*, 1954, no. 3, Mar., p. 28-33.
Experiments using mixtures of organic and mineral fertilizers. Table, photograph.

NIKONOV, M.N., prof.; FATCHIKHINA, O.Ye., kand. sel'khoz. nauk; GORSHKOV, L.A.; KOCHER, S.G.; KATS, P.S., kand. sel'-khoz. nauk; GRIGOR'YEVA, A.I., red.; SOKOLOVA, N.N., tekhn. red.

[Peat in agriculture]Torf v sel'skom khoziaistve. [By] M.N. Nikonov i dr. Moskva, Sel'khozizdat, 1962. 166 p. (MIRA 15:11)

(Fertilizers and manures) (Peat)

CHULAK'YAN, V.A.; GORSHKOV, L.I.

New transporters manufactured at the Lugansk Diesel Locomotive Plant. Mashinostroenie no.4:117 Jl-Ag '62. (MIRA 15:9)
(Lugansk--Railroads--Freight cars)

GORSHKOV, L.I., inzh.; KUZ'MICH, L.D., inzh.

New type of high-capacity flatcars. Zhel. dor. transp. 46 no.1:37-39 Ja '64. (MIRA 17:8)

1. Nachal'nik byuro transporterov Luganskogo teplovozostroitel'nogo zavoda (for Gorshkov). 2. Nachal'nik otdela Vsesoyuznogo nauchno-issledovatel'skogo instituta vagonostroyeniya (for Kuz'mich).

GORSHKOV, Lev Mikhaylovich; SERGEYEV L.A., red.

[Simplest shelters for protection from weapons of mass destruction] Prosteishie ukrytiia dlia zashchity ot oruzhiia massovogo porazheniia. Moskva, DOSAAF, 1965. 47 p. (MIRA 18:5)

L 20650-66 EWT(1)/EWA(h) JM

ACC NR: AP6007640 SOURCE CODE: UR/0141/66/009/001/0167/0172

AUTHOR: Gorshkov, L. M.

ORG: Scientific-Research Institute of Radiophysics, Gor'kiy University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Measuring the static potential distribution in a smooth-anode magnetron by a probe method using an electron-beam indicator

SOURCE: IVUZ. Radiofizika, v. 9, no. 1, 1966, 167-172

TOPIC TAGS: magnetron, magnetron investigation

ABSTRACT: The measurement setup included (see Fig. 1) hollow cylindrical cathode 2 with a narrow slit through which a thin electron (probing) beam could pass. This beam (150-200-micron diameter) effected by tungsten heater 3, is curved by the electric and magnetic fields and arrives at point 4 (collector) on anode 1. Beam path 5 depends on the initial electron velocity, magnetic-field strength, and anode-cathode field distribution. The beam arrival at the collector is detected by current in the collector circuit. Under test conditions, the initial

Card 1/2 UDC: 621.385.64

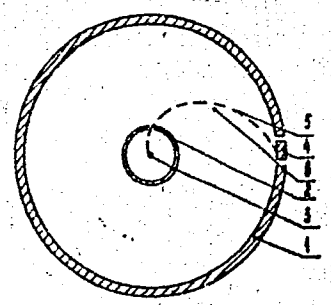

Fig. 1. Principle of measuring electric field distribution

electron velocity is so selected that the collector current is maximum. If the potential of thin metal wire probe 6 differs from the original potential of the point where the probe is placed, the collector current will drop. By adjusting the probe potential, the collector current can again be brought to its maximum value. Hence, by moving probe 6 and adjusting its potential each time, an anode-cathode potential distribution curve can be measured. Two experimental tubes constructed along the above lines were used for electric field measurements. Comparison of experimental curves with the theoretical shows that the potential distribution differs little from the Brillouin distribution and can be even better described by the theory of the bidromic state with two-loop electron paths. "The author wishes to thank M. I. Kuznetsov for his constant interest in the project and his important comments."
Orig. art. has: 6 figures, 1 formula, and 1 table. [03]

SUB CODE: 09 / SUBM DATE: 19Apr65 / ORIG REF: 003 / OTH REF: 003
ATD PRESS: 4225

GORSHKOV, M. A.

Windbreaks, Shelterbelts, Etc.

Work of shelterbelt stations in the Buzuluk pine forest. Les. khoz. 5 no. 3(42), 1952

Monthly List of Russian Accessions, Library of Congress, July 1952, Unclassified.

GORSHKOV, M. A.

Tractors

Coefficient for conversion of work done by tractor in rooting out stumps. Les. khoz. 5, No. 7, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952 Unclassified.

GORSHKOV, M. A.

Machine-Tractor Stations

Some problems in raising the economic effectiveness of machine-tractor stations' work. Sots. sel'.khoz. 23, no. 7, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, OCTOBER 1952. UNCLASSIFIED.

L 38153-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(j)/EWP(k)/EWP(h)/EWP(l) IJP(c) EM/WW/RM

ACC NR: AP6025676 SOURCE CODE: UR/0413/66/000/013/0145/0146

INVENTOR: Akat'yev, V. I.; Gorshkov, M. A.; Antonov, V. M.

ORG: none

TITLE: Stand for rolling glued films for covering helicopter rotor blades. Class 62, No. 183602

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 145-146

TOPIC TAGS: rolling mill, helicopter rotor, rotor blade

ABSTRACT: An Author Certificate has been issued for a stand for rolling glued films for covering helicopter rotor blades, consisting of a stand with magazines for the

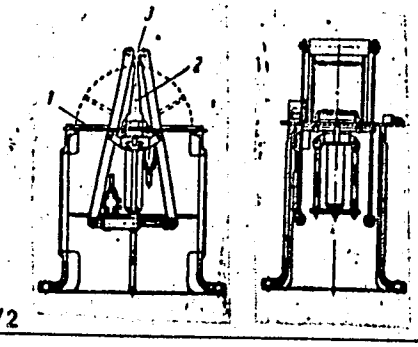

Fig. 1. Stand for rolling glued films for covering helicopter blades

1 - Magazines; 2 - mandrel; 3 - support.

Card 1/2 UDC: 629.13.01/06.620.178

L 38153-66

ACC NR: AP6025676

films, stitching rolls connected articulately through cranks with an actuating cylinder rod, and frames for holding the films; these are mobilely connected by a toothed gear to the coupling arm of the actuating cylinder. To increase work quality and efficiency, the stand is equipped with a two-sided mandrel with a support at the apex, grooves for the frames holding the films, and radial projections at the base by which it is secured to the stand (see Fig. 1). Orig. art. has: 1 figure. [KT]

SUB CODE: 01,13/ SUBM DATE: 07Jun65/ ATD PRESS: 5144

Card 2/2 MLP

GORSHKOV, M. F.

Ispytaniia samoleta Glenn Martin 139 WR v polete. Moskva, 1939. 26 p., tables, diagrs. (TSAGI. Trudy, no. 394)

Title tr.: Flight testing of the Glenn Martin 139 WR.

QA911.M65 no. 394

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

Gorshkov, M. F.

GORSHKOV, M. F.

Preparation of maps for navigation by wireless. 4p. (Gt. Britain. Ministry of Aircraft Production. RTP Tr. 1506)

Trans. from the Russian original publ. in Vestnik vozdushnogo flota, 1941, v.23, no.1, p.46-48.

DNACA NNIAS

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

GORSHKOV, M. F.

PHASE X TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 752 - X

BOOK Call No.: AF657727

Authors: SOKOLOV, V.I., Maj. Gen. of Aviation, KUDRYAVTSEV, N. F., GORSHKOV, M. F., KUNITSKIY, R. V., TORGMAN, A. I.

Full Title: AIRCRAFT NAVIGATION (Textbook)

Transliterated Title: Samoletovozhdeniye

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of the Ministry of Defense of the USSR

Date: 1955 No. pp.: 367 No. of copies: Not given

Editorial Staff: Sokolov, V. I., Maj. Gen of Aviation

PURPOSE AND EVALUATION: A textbook for aviation schools and for the flying personnel of the Air Force. The text is easy to follow. Its value is only instructural.

TEXT DATA

Coverage: The book is presented in an easily accessible form, and is provided with 200 diagrams and 16 tables, The instruments are shown mostly schematically, and are not identified by trademarks. A number of examples of calculation of navigational data are given.

NOTE: See card for SOKOLOV, V. I. for pages 2-4 of the report.